MONTHLY WEATHER REVIEW,

JANUARY, 1880.

(General Weather Service of the United States.)

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In preparing this REVIEW the following data, received up to February 14th, have been used, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 136 Signal Service stations and 16 Canadian stations, as telegraphed to this office; 157 monthly journals and 150 monthly means from the former, and 12 monthly means from the latter; reports from 27 Sunset stations; 234 monthly registers from Voluntary Observers; 43 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports from Voluntary Observers in, and the local Weather Service of, Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

The general distribution of atmospheric pressure for the month, as reduced to sea-level, is shown by the isobaric lines upon Chart No. II. When compared with the January averages for the past eight years, the distribution of pressure for the present January is found to be very abnormal. From Lake Ontario to Virginia and thence northeastward to Maine it has been in excess, gradually increasing northeastwards to 0.13 inch on the east coast of New England; it is also slightly in excess (0.04) at Santa Fe and San Francisco. At all other stations there has been a deficiency; it averages about 0.04 on the South Atlantic coast and Lake Erie; 0.08 along the Gulf coast; 0.11 from Arkansas to the Lower Ohio valley and lakes Michigan and Superior, and in the Lower Missouri and Upper Mississippi valleys, 0.18; the largest deficiency, 0.21, occurs at La Crosse. At Virginia City, Montana, the deficiency is 0.13 and at Portland, Oregon, 0.11.

Local Barometric Ranges.—The total range of the reduced barometric readings have averaged about as follows: New England, 1.14 inch at Wood's Holl to 1.38 inch at Burlington; Middle States, 1.21 inch at New York to 0.93 inch at Norfolk; South Atlantic and Gulf States, 0.80 inch at Wilmington, 0.54 inch at Key West, 0.63 inch at New Orleans, 0.69 inch at Indianola, 0.97 inch at Shreveport; Mississippi and Ohio valleys and Lake region, from 0.99 inch at Memphis to 1.11 inch at Pittsburgh, 1.39 inch at Alpena and 1.33 inch at Duluth; Eastern Slope, 1.42 inch at Bismarck and 1.33 inch at Dodge City; Rocky Mountain Stations, 0.67 inch at Santa Fé to 1.19 inch at Virginia City; Plateau Districts, 1.00 inch at Salt Lake and Winnemucca, and 1.28 inch at Boise City; California, 0.61 inch at Los Angeles to 0.92 inch at Red Bluff.

Areas of High Barometer.—Thirteen high areas have appeared within the limits of the United States during the month. Nine of them appeared to develop over the extreme Northwest or Manitoba; one over the Mississippi valley, while the other three first appeared upon the Pacific coast. The latter are specially interesting on account of the low temperatures accompanying them.